



ORBITAL AUTOMATION PVT. LTD.



PRODUCT CATALOGUE

www.orbitalautomation.com

About Us

Orbital established in 1985, a pioneer in introducing Orbital / Spin Riveting Machines in India, has grown and diversified into various other high quality Automation products along with themselves providing Assembly Lines for Industrial Automation. Orbital is one of a leading Indian Industrial brand for its various products.

Orbital also exports their standard products and Assembly lines to Europe, UK, USA, Brazil, Japan, China, South Africa, UAE & South-East Asia.

Today Orbital Mechanical division is a group of companies of : Orbital Systems (Bom) Private Ltd. (Established. In 1985), Progressive Indexing Systems Private Ltd. (Established. In 2002) & Orbital Automation Private Ltd. (Established. In 2017).

To maintain world class quality in the standard products and Assembly Lines, Orbital has Design, Manufacturing, Quality Check, Assembly and Testing facilities in-house to achieve its quality precision work.

Factory Tour



Quality Control Dept.



Machine Shop.



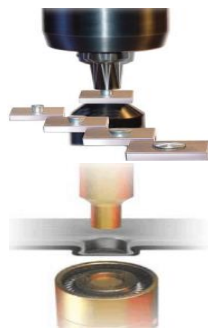
Design Dept.



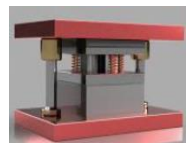
Assembly Shop.

Our Products

- [Riveting Machine](#)



- [Press](#)



- [Clinching Machine](#)



- [Screw Tightening](#)



- [Cam Indexers](#)



- [Assembly Lines](#)



Orbital Riveting Machines

- Noiseless, non-impact process with min. distortion of grain structure
- Machine can rivet from freely swiveling joints to clamped, torque resisting joints.
- Accessories : Multi-Point, Multi-Spindle, Pressure Pad & Roll Forming
- Process Monitoring to control Force & Stroke parameters
- Input Supply : 3 Phase, 415VAC

MODELS	M005	M008	M012	M012H	M016H	M020H
Max.Capacity [38kg/mm ²][mm]	6	8	12	12	16	20
Stoke* [mm]	0-30	0-45	0-45	0-45	0-45	0-45
Rated Power [kW]	0.37	0.75	1.2	2.7	4.5	5.9
Air Pressure [Bar]	2-6	2-6	2-6	-	-	-
Oil Pressure [Bar]	-	-	-	20-50	20-80	20-120
Shut Height* Max [mm]	180	225	250	250	260	290
Throat Depth* [mm]	110	140	200	200	200	200

Note : * : Non-std. Throat, Shut Height, Stroke available on request



Radial Riveting Machines

- Point contact with low transverse forces and gentle deformation
- Machine recommended for hard rivet material
- Process Monitoring to control Force & Stroke parameters
- Input Supply : 3 Phase, 415VAC

MODELS	R006	R008	R012	R016H
Max.Capacity [38kg/mm ²][mm]	6	8	12	16
Stoke* [mm]	0-30	0-45	0-45	0-75
Rated Power [kW]	0.37	0.75	1.2	4.5
Air Pressure [Bar]	2-6	2-6	2-6	-
Oil Pressure [Bar]	-	-	-	0-80
Shut Height* Max [mm]	180	225	250	260
Throat Depth* [mm]	110	140	200	200

Note : * : Non-std. Throat, Shut Height, Stroke available on request



Servo Riveting / Roll Forming Machines

- For precisely accurate and controlled Riveting / Roll Forming operation
- Built-in Process Monitoring to control Force & Stroke parameters
- Input Supply : 3 Phase, 415VAC

SI Series: Force Actuator is Servo Motor & Rotary Actuator is Induction Motor					
SERVO ORBITAL	SIM05	SIM08	SIM12	SIM14	SIM16
SERVO RADIAL	SIR05	SIR08	SIR12	SIR14	SIR16
SERVO ROLL FORMING	SIF05	SIF08	SIF12	SIF14	SIF16
Max.Capacity# [38kg/mm ²][mm]	5	8	12	14	16
Stoke* [mm]	50	50	50	50	50
Max.Approach Speed [mm/s]	250	160	110	65	65
Repeatability with servo [mm]	+/-0.02				
Spindle Speed# [RPM]	1440				
Shut Height Max [mm]	180	225	250	250	260
Throat Depth [mm]	110	140	200	200	200
Load Accuracy [Std.]	+/-5%				
Load Accuracy with Load Cell	+/-0.5%				

Note : * : Non-Std. Stroke available on request [Max. stroke available 100mm]
: Not applicable to Roll Forming



Auto Feed Riveting Machine

- Pneumatically driven, tooled to automatically feed one rivet per cycle
- Rivets Semi-tubular and Tubular rivets, Diameter 3-10mm.
- Input Supply : 1 Phase, 220VAC



MODELS	AR05	AR10	AR20	AR40
MS Semi-Tubular Rivet [mm]	3	5	7	10
Stroke [mm]	50	50	50	50
Tonnage [Ton]	0.5	1.0	2.0	4.0
Air Pressure [Bar]	2-5	2-5	2-5	2-5
Shut Height* Max [mm]	40	40	40	40
Throat Depth* [mm]	200/300/500		200/400	

Portable Gun Riveting Machine

- High speed, low noise, Easy to use & highly efficient Portable
- Complete solution with rigid portable riveting head, High pre hydraulic powerpack, High pressure hose, Spring balancer an panel
- Swivel type and Fixed type hanging arrangements
- Input Supply : 3 Phase, 415VAC



MODELS	PR-30-120	PR-30-200	PR-30-260	PR-40-140	PR-40-200	PR-40-290	PR-50-120	PR-50-240
Tonnage [Ton]	30	30	30	40	40	40	50	50
Throat* [mm]	120	200	260	140	200	290	120	240
Cold Rivet Dia [mm]	10	10	10	12	12	12	14	14
Hot Rivet Dia [mm]	16	16	16	20	20	20	22	22
Stroke [mm]	80	80	80	90	90	90	120	120
Oil Pressure [Bar]	80	80	80	90	90	90	120	120

Note : * : Non-std. Throat available on request

Clinching Machine

- Sole Selling Distributor of BTM, USA in India
- Strong consistent, Vibration resistant and Leak proof joints
- Joins MS, Galvanized Steel, Pre-painted, Al, Cu, dissimilar metals
- Joins 2 or more sheets with combined thickness from 0.4-6.0 mm
- Input Supply : 1 Phase, 220VAC for Stand Alone and
3 Phase, 415VAC for Portable machine

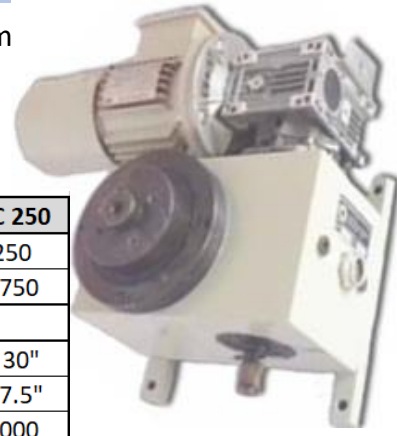


MODELS	STAND ALONE M/C		PORTABLE M/C	
Tonnage [Ton]	4.0	8.0	4.0	6.0
Throat* [mm]	120	200	260	240
Shut Height* [mm]	40	65	40	40
Stroke* [mm]	50	75	50	50
Air Pressure [Bar]	2-5	2-5	-	-
Oil Pressure [Bar]	-	-	30-200	30-200

Note : * : Non-std. Throat, Shut Height, Stroke available on request

Globoidal Cam Indexer – GC Series

- Roller Gear Cam mechanism with precision ground Globoidal Cam and Cam Followers in a precision machined Turret.
- High Speed, Continuous Applications
- Input Supply : 3 Phase, 415VAC



MODELS	GC 60	GC 90	GC 120	GC 160	GC 200	GC 250
Center Distance [mm]	60	90	120	160	200	250
Nominal Dial Plate Size [mm]	420	630	840	1120	1400	1750
Number of Stops	2, 3, 4, 5, 6, 8, 10, 12, 15, 16, 20, 24					
Accuracy ["]	± 40"	± 40"	± 30"	± 30"	± 30"	± 30"
Repeatability ["]	± 10"	± 10"	± 7.5"	± 7.5"	± 7.5"	± 7.5"
Output Torque Capacity [Nm]	24	70-250	90-350	500-820	900-1500	2000
Weight w/o Gearbox & Motor [kg]	15	32	62	142	258	280
Input Power with Motor [HP]	0.25	0.25	0.5	1.0	2.0	2.0

Hollow Shaft Cam Indexer – HS Series

- Stationery center through bores for routing the supply lines
- High Torque carrying capacity
- Excellent solution for Indexing Table Automation
- Input Supply : 3 Phase, 415VAC



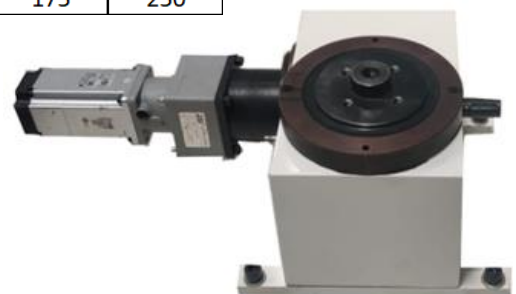
MODELS	HS 70	HS 90	HS 120	HS 160
Center Distance [mm]	70	90	120	160
Nominal Dial Plate Size [mm]	630	810	1080	1440
Number of Stops	4, 5, 6, 8, 10, 12, 15, 16, 20, 24			
Accuracy ["]	± 40"	± 40"	± 30"	± 30"
Repeatability ["]	± 10"	± 10"	± 7.5"	± 7.5"
Output Torque Capacity [Nm]	100-200	300-500	550-900	1100-2200
Weight w/o Gearbox & Motor [kg]	35	45	85	190
Input Power with Motor [HP]	0.25	0.5	1.0	2.0

Servo Mechanical Indexer – SGC Series / SHS Series

MODELS	SGC 60	SGC 90	SGC 120	SGC 160	SGC 200	SGC 250
Center Distance [mm]	60	90	120	160	200	250
Nominal Dial Plate Size [mm]	420	630	840	1120	1400	1750
Internal Gear Ratio	1:8	1:8	1:8	1:8	1:8	1:8
Accuracy ["]	± 60"	± 60"	± 60"	± 60"	± 60"	± 60"
Repeatability ["]	± 15"	± 15"	± 15"	± 15"	± 15"	± 15"
Output Torque Capacity [Nm]	24	100	350	600	1400	2000
Weight w/o Gearbox & Motor [kg]	15	32	62	142	258	280
Max. Input Torque [Nm]	3	12	43	75	175	250

- Large torque with smaller Servo Motor
- Input Supply :
1 Phase, 220VAC or
3 Phase, 415VAC
based on Servo
Motor selection

MODELS	SHS 70	SHS 90	SHS 120	SHS 160
Center Distance [mm]	70	90	120	160
Nominal Dial Plate Size [mm]	630	810	1080	1440
Internal Gear Ratio	1:8	1:8	1:8	1:8
Accuracy ["]	± 60"	± 60"	± 60"	± 60"
Repeatability ["]	± 15"	± 15"	± 15"	± 15"
Output Torque Capacity [Nm]	200	400	800	1700
Weight w/o Gearbox & Motor [kg]	35	45	85	190
Max. Input Torque [Nm]	25	50	100	212



Servo Press Machine

- For Precisely accurate and controlled pressing operation
- Highly energy efficient
- Built-in Process Monitoring to control Force and Stroke parameters.
- Safety brake is included as standard
- Input Supply: 1 Phase 220VAC or 3 Phase, 415VAC (Servo Motor selection)



MODELS	PS005	PS010	PS020	PS035	PS050
Tonnage [Ton]	0.5	1.0	2.0	3.5	5.0
Max.Approach Speed [mm/s]	250	160	160	80	65
Max.Pressing Speed [mm/s]	30	30	30	30	30
Repeatability with servo [mm]	+/-0.02				
Stroke* [mm]	100	100	100	100	100
Load Accuracy [Std.]	+/-5%				
Load Accuracy with Load Cell	+/-0.5%				
Note : * : Non-Std. Stroke available on request [Max. stroke available 500mm]					

Pneumatic / Hydro-Pneumatic Press

MODELS	PN-005	PN-010	PN-020
Max. Capacity Tonnage [Ton]	0.5	1.0	2.0
Stroke [mm]	30/70	45/75	45/75
Shut Height* Max [mm]	180	225.0	250.0
Throat Depth* [mm]	110	140	200
Air Pressure [Bar]	3-7	3-7	3-7
Frame Structure	C-Frame, 2 Pillar & 4 Pillar		

MODELS	PHN-010	PHN-020	PHN-040	PHN-080	PHN-150	PHN300	PHN-450
Max. Capacity Tonnage [Ton]	1.0	2.0	4.0	8.0	15.0	30.0	45.0
Stroke [mm]	50*/75/100/150#						100/200
Power Stroke [mm]	24	6*/12/24#					6/12
Shut Height* Max [mm]	180	225.0	250.0	180	225.0	250.0	250.0
Throat Depth* [mm]	110	140	200	110	140	200	200
Air Pressure [Bar]	3-6	3-6	3-6	3-6	3-6	3-6	3-6
Frame Structure	C-Frame, 2 Pillar & 4 Pillar						
Note : * : 50mm Stroke is with 6mm Power Stroke / #: 150mm Stroke is with 24mm Power Stroke							

- Pneumatic & Hydro-Pneumatic Press as per the table are available
- Dial Lock facility for ease and precise stroke setting
- Input Supply : 1 Phase, 220VAC



Auto Screw Feeding & Screw Tightening Machine

- Screws loaded into Feeder and automatically fed to tip of Screw Driver
- Saves 1.5 – 2.0 secs per screw
- Hand Held, Stand alone (Pneumatically operated), Robotic & Servo Screwing .
- Vacuum based screwing option available
- Two Finger or Collet type head tooling solution available
- Vertical & Horizontal screwing operation in Stand Alone available
- Single & Multi-Spindle screwing in Stand Alone to increase productivity
- Toggle Arm and Torque positioning Arms available
- Feeding Systems – Step Feeders, Bowl Feeders and Refill Hopper



Assembly Lines-Stand Alone, Rotary & Conveyorized



Stand Alone Assembly Line



Rotary Assembly SPM

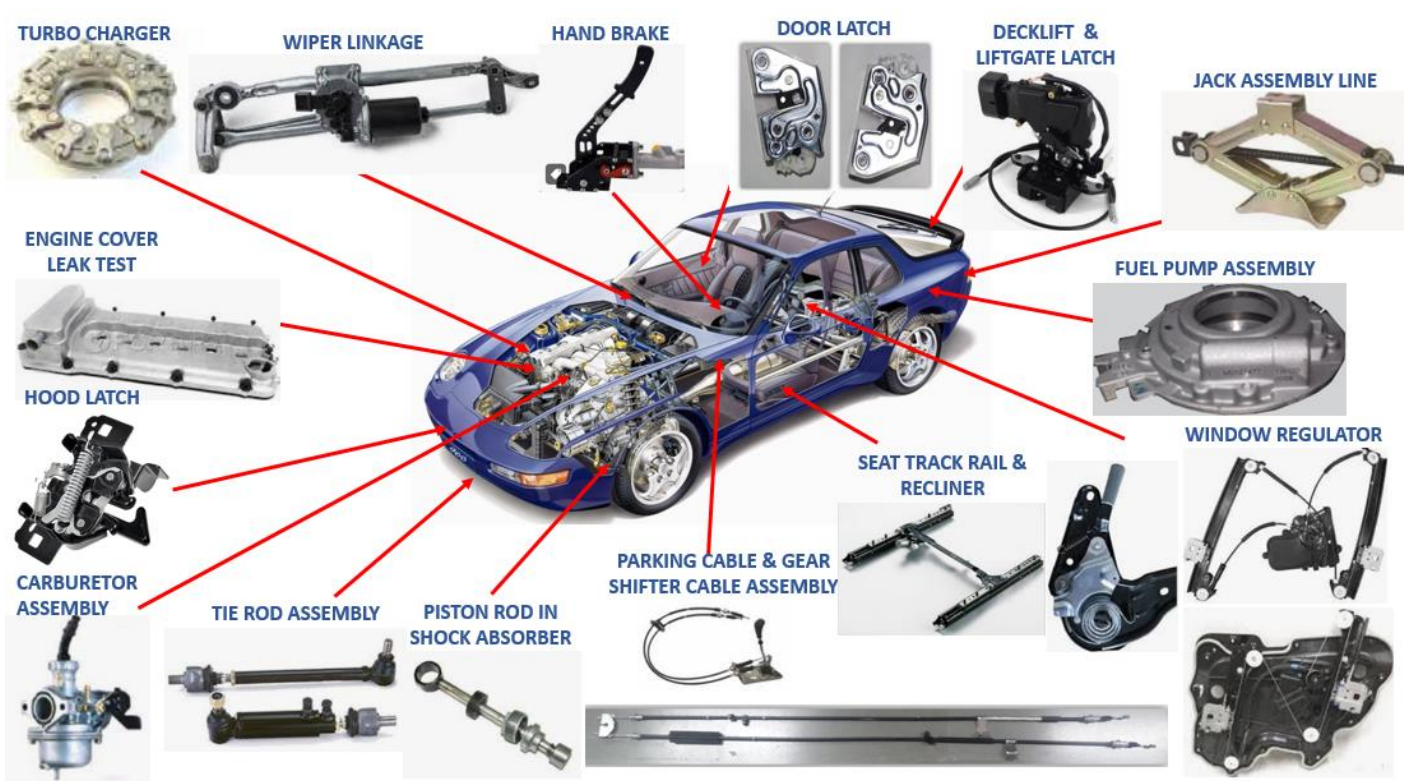


Conveyorized Assembly Line

Orbital is dedicated to partnering with customers to design and build customised automation solutions which includes from concept to design, manufacturing, programming and building complete assembly solution with traceability, datalogging, Scada to Industrial 4.0 Automation, all under one roof.

AUTOMOTIVE SECTOR :

Orbital has supplied SPMs or Assembly Line along with EOL testing for various parts to the Automotive industries as shown below : .



ELECTRICAL SECTOR :

- MCB with HV, Continuity, Thermal & Magnetic Trip & Hold Test
- MCCB Mechanism
- MCB & MCCB Arc Chute Assembly
- Capacitor Crimping, Pressing and Grooving
- Pilot Lamp Assembly



SOME OF OUR ESTEEMED CUSTOMERS



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